

Bush Moon-Mars Budget: All Smoke and Mirrors

by Marsha Freeman

When President Kennedy announced his initiative to land a man on the Moon, in 1961, he told the Congress that if they were not willing to fund it adequately, it should not be done at all. President Bush is not even giving Congress that choice: The budget the White House has requested for the space program for Fiscal Year 2005 will not support a manned return to the Moon, much less extended stays there, or future missions to Mars.

At a briefing on the NASA budget on Feb. 3, Administrator Sean O'Keefe bragged that the space agency was slated for a 5.6% increase next fiscal year, as compared to almost all other discretionary spending, which is either flat or in decline. Considering that about half of the proposed increase, or nearly \$400 million, is slated for the Space Shuttle program, mainly to allow the fleet to return to flight, the increase is, in fact, on the order of the rate of inflation.

Even were NASA just to continue to fly the Space Shuttle and complete construction of the International Space Station, this budget would be inadequate. The Columbia Accident Investigation Board report released last Summer made clear that one cause of the Shuttle accident was the lack, over at least the past decade, of adequate resources, up-grades, and safety improvements for the Space Shuttle.

But NASA was given *additional* goals by President Bush on Jan. 14—to return people to the Moon, for extended periods, and then to send the first manned mission to Mars. Judging from the current budget request, this is essentially another unfunded mandate.

The President and Administrator O'Keefe have made headlines by stating that the new Space Exploration Systems program will be allocated \$11 billion over the next five years, to start the ambitious Moon-Mars program. But both have also reassured critics that their program will be “sustainable” and “fiscally responsible,” in the context of cutting the budget deficit. This has been accomplished by cutting back on micro-gravity research on the space station; delaying any starts of new space science programs; dragging out the timetables (which increases the cost) for completing projects already under way; and eliminating Space Shuttle-life extension programs, which would increase safety as well as years of operation for the space transportation system.

This approach of robbing Peter to pay Paul is justified as “refocussing” the space agency toward the exploration mission, and eliminating efforts that do not contribute to it. Noth-

ing could be more short-sighted. There is nothing that NASA does (leaving aside the “pork” programs that Congressmen insert into the budget to benefit their home districts), that does not contribute to the overall exploration mission of the agency.

Typical of this foolhardy approach is the proposal that money for exploration will be allocated from what is “saved” by “retiring” the Shuttle and “backing away” from the space station. The Shuttle, under this scenario, is to fly until 2010 to complete the space station, and then after that (and after George Bush is out of office, even were he to win a second term), the United States would have to figure out how to launch its astronauts *to anywhere* while a new crew transport vehicle is being developed.

A Few Missing Details

Even within its own terms—and leaving aside the stupidity of throwing away billions of dollars of development of the Shuttle, which could be outfitted as an automated cargo carrier post-2010; and of “backing away” from the full use of the space station, which should be an integral part of the Moon-Mars mission—the five-year budget that has been presented leaves gaping holes.

The budget projects that over five years, NASA will develop a crew exploration vehicle, termed Project Constellation, at a cost of \$6.6 billion. This vehicle is supposed to be modular and adaptable to excursions to Earth orbit, to the Moon, or to Mars. It replaces the Orbital Space Plan project. But that was estimated to cost at least \$8 billion to develop, and was designed only to fly around the Earth.

The crew vehicle that is proposed would have to be launched on an expendable rocket. The problem is that there is no American rocket available that has the necessary lift capability to do this, or that is man-rated. Money for developing the launcher for the crew vehicle is not included in the budget, even though tests of the new spacecraft are supposed to start in 2008.

The FY 2005 budget includes \$70 million to start development of an unmanned lunar orbiter to launch in 2008, and a lander the following year. It is projected that by 2009, lunar spending will increase to \$420 million, for work on a series of unmanned missions leading to a manned landing as early as 2015. But the money is projected to support only up to *one* lunar mission per year. That is hardly adequate to conduct “sustained” research, “evaluate lunar resources and technologies,” and provide for extended human stays. No provision is made to start development of an interplanetary transport system for cargo, or the nuclear propulsion system needed for crew transport, that would make this goal realizable.

It is of no consequence that the NASA budget increases, while that most other discretionary spending declines. It will take more than “refocussing” the agency and shifting money around, to accomplish the goals that the President outlined in his vision for space exploration.